

Application Serial No. 09/214,124

Atty. Docket No. 017753-109

Amendments To The Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-7. (Canceled)

8. (Currently amended) A vector for the expression of one or more genes of interest comprising a nucleotide sequence isolated from the 5' end of the genomic RNA of a avian reticuloendotheliosis virus of type A (REV-A) ~~or from the DNA equivalent of said genomic RNA~~, wherein said nucleotide sequence comprises ~~all or part of the region of said 5' end which extends from the site of initiation of transcription up to the initiation codon of the gag gene~~ at least the portion of the sequence presented in SEQ ID NO: 2 starting at nucleotide 452 and ending at nucleotide 578 or the DNA equivalent of said portion in which U nucleotides are replaced by T nucleotides.

9. (Previously presented) The vector according to claim 8, wherein said vector is a plasmid vector or a viral vector derived from a virus selected from the group consisting of poxvirus, adenovirus, baculovirus, herpesvirus, adeno-associated virus and retrovirus.

10. (Previously presented) The vector according to claim 8, which is derived from a retrovirus and which comprises at least the following elements associated in a functional manner: a retroviral 5' LTR and a retroviral 3' LTR, one or more genes of interest, and said nucleotide sequence to allow the encapsidation of said vector into a viral particle or as an IRES site to allow or promote the expression of a gene of interest positioned downstream of said nucleotide sequence.

11. (Previously presented) The retroviral vector according to claim 10, in which said nucleotide sequence is an IRES site and comprising, in addition, an encapsidation region which is heterologous to said nucleotide sequence.

Application Serial No. 09/214,124

Atty. Docket No. 017753-109

12. (Currently amended) The retroviral vector according to claim 10, comprising at least the following elements (a) to (f) associated in a functional manner:

- (a) a retroviral 5' LTR,
- (b) an encapsidation region,
- (c) a first gene of interest,
- (d) an IRES site,
- (e) a second gene of interest, and
- (f) a retroviral 3' LTR,

wherein at least one of the encapsidation region and the IRES site ~~consisting~~ consists of said nucleotide sequence.

13. (Previously presented) The retroviral vector according to claim 48, in which the internal promoter region, the second gene of interest, the IRES site and the third gene of interest are in an opposite orientation relative to the retroviral 5' and 3' LTRs.

14. (Currently amended) The retroviral vector according to claim 12, in which the encapsidation region is derived from a murine retrovirus, or from a VL30-type retrotransposon and the IRES site comprises ~~a nucleotide sequence which is identical to the~~ portion of the sequence presented in the sequence identifier SEQ ID NO: 2 ~~or to the DNA equivalent of said sequence:~~

- (i) starting at nucleotide 1 and ending at nucleotide 578,
- (ii) starting at nucleotide 265 and ending at nucleotide 578, or
- (iii) starting at nucleotide 452 and ending at nucleotide 578

or to the DNA equivalent of said portion (i), (ii), or (iii), in which U nucleotides are replaced by T nucleotides.

Application Serial No. 09/214,124

Atty. Docket No. 017753-109

15. (Currently amended) The retroviral vector according to claim 14, in which the encapsidation region is derived from an MoMLV and the IRES site comprises a ~~nucleotide sequence identical to the portion of the sequence presented in sequence identified SEQ ID NO: 2 starting at nucleotide 265 and ending at nucleotide 578, or to the DNA equivalent of said sequence, starting at nucleotide 265 and ending at nucleotide 578~~ portion in which U nucleotides are replaced by T nucleotides.

16. (Canceled)

17. (Previously presented) The vector according to claim 8, comprising a gene of interest encoding a product of expression selected from factor VIII, factor IX, the CFTR protein, dystrophin, insulin, alpha-, beta- or gamma-interferon, an interleukin (IL) and a selectable marker.

18. (Currently amended) A viral particle generated from ~~a viral~~ the vector according to claim 8.

19. (Currently amended) An isolated cell comprising a the vector according to claim 8 or infected with a the viral particle ~~generated from a viral vector~~ according to claim 8 18.

20-24. (Canceled)

25. (Currently amended) A method for providing an internal ribosome entry site (IRES) to a vector for the transfer and expression of one or more genes of interest, comprising the step of introducing into said vector a nucleotide sequence isolated from the 5' end of the genomic RNA of a an avian reticuloendotheliosis virus of type A (REV-A) ~~or from the DNA equivalent of said genomic RNA, wherein said nucleotide sequence comprises all or part of the region of said 5' end, which extends from the site of initiation of transcription up~~

Application Serial No. 09/214,124

Atty. Docket No. 017753-109

~~to the initiation codon of the gag gene~~ at least the portion of the sequence presented in SEQ ID NO: 2 starting at nucleotide 452 and ending at nucleotide 578 or the DNA equivalent of said portion in which U nucleotides are replaced by T nucleotides.

26-28. (Canceled)

29. (Currently amended) The method of claim 28 25, wherein said nucleotide sequence ~~is identical to~~ comprises the portion of the sequence presented in the sequence identifier SEQ ID NO:2 ~~or to the DNA equivalent of said sequence:~~

- (i) starting at nucleotide 1 and ending at nucleotide 578,
 - (ii) starting at nucleotide 265 and ending at nucleotide 578, or
 - (iii) starting at nucleotide 452 and ending at nucleotide 578
- or to the DNA equivalent of said portion (i), (ii), or (iii), in which U

nucleotides are replaced by T nucleotides.

30. (Canceled)

31. (Currently amended) A method of allowing or activating the encapsidation of a retrovirus or of a retroviral vector, comprising the step of introducing into said retrovirus or retroviral vector, a nucleotide sequence isolated from the 5' end of the genomic RNA of a reticuloendotheliosis virus of type A (REV-A) ~~or from the DNA equivalent of said genomic RNA~~, wherein said nucleotide sequence comprises ~~all or part of the region of said 5' end which extends from the site of initiation of transcription up to the initiation codon of the gag gene~~ at least the portion of the sequence presented in SEQ ID NO: 2 starting at nucleotide 265 and ending at nucleotide 578 or the DNA equivalent of said portion in which U nucleotides are replaced by T nucleotides.

Application Serial No. 09/214,124

Atty. Docket No. 017753-109

32-34. (Canceled)

35. (Currently amended) The method of claim ~~34~~ 31, wherein said nucleotide sequence ~~is identical to~~ comprises the portion of the sequence presented in the sequence identifier SEQ ID NO:2 ~~or to the DNA equivalent of said sequence~~:

- (i) starting at nucleotide 1 and ending at nucleotide 578,
 - (ii) starting at nucleotide 265 and ending at nucleotide 578, or
 - (iii) starting at nucleotide 452 and ending at nucleotide 578
- or to the DNA equivalent of said portion (i), (ii) or (iii), in which U nucleotides

are replace by T nucleotides.

36. (Canceled)

37. (Canceled)

38. (Previously presented) A method for the preparation of one or more polypeptides of interest by recombination techniques, comprising the step of culturing *in vitro* a cell comprising a vector according to claim 8 and harvesting said polypeptide(s) from the supernatant or from the cell culture.

39. (Canceled)

40. (Currently amended) An *in vitro* method for expressing one or more genes of interest into pluripotent cells, comprising the step of transfecting or infecting said pluripotent cells with a the vector according to claim 8 or a the viral particle generated from a viral vector according to claim 8 ~~18 or a pharmaceutical composition prepared from said vector or viral particle.~~

Application Serial No. 09/214,124

Atty. Docket No. 017753-109

41. (Previously presented) The method of claim 40, wherein said pluripotent cells are of the central nervous system.

42 - 44. (Canceled)

45. (Currently amended) The vector of claim 44 8, wherein said nucleotide sequence ~~is identical to~~ comprises the portion of the sequence presented in the sequence identifier SEQ ID NO:2 ~~or to the DNA equivalent of said sequence:~~

- (i) starting at nucleotide 1 and ending at nucleotide 578,
 - (ii) starting at nucleotide 265 and ending at nucleotide 578, or
 - (iii) starting at nucleotide 452 and ending at nucleotide 578
- or to the DNA equivalent of said portion in which U nucleotides are replaced

by T nucleotides.

46. (Canceled)

47. (Previously presented) The retroviral vector according to claim 11, in which said encapsidation region is from MoMLV.

48. (Currently amended) The retroviral vector according to claim 10, wherein said vector comprises the following elements (a) to (h) associated in a functional manner:

- a) a retroviral 5' LTR,
- b) an encapsidation region,
- c) a first gene of interest,
- d) an internal promoter region of a different origin from that of said retroviral 5' LTR,
- e) a second gene of interest,

Application Serial No. 09/214,124

Atty. Docket No. 017753-109

- f) an IRES site,
- g) a third gene of interest, and
- h) a retroviral 3' LTR,

wherein at least one of the encapsidation region and the IRES site consists of said nucleotide sequence.

49. (Currently amended) The retroviral vector according to claim 15, in which the encapsidation region is derived from an MoMLV and the IRES site comprises a ~~nucleotide sequence identical to the portion of~~ the sequence presented in the sequence identifier SEQ ID NO:2 starting at nucleotide 452 and ending at nucleotide 578, or to the DNA equivalent of said sequence, starting at nucleotide 452 and ending at nucleotide 578 portion in which U nucleotides are replaced by T nucleotides.

50. (Canceled)

51. (Previously presented) A method for the preparation of one or more polypeptides of interest by recombination techniques, comprising the step of culturing *in vitro* a cell infected with a viral particle according to claim 18 and harvesting said polypeptide(s) from the supernatant or from the cell culture.